

LXXXII.—*Sexual Differences in the Péciliid Fishes of the Genus Cynolebias.* By C. TATE REGAN, M.A.

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HERR A. RACHOW, of Hamburg, has written calling my attention to the fact that I have overlooked a paper by C. Berg (*Anales Mus. Nac. Buenos Aires*, v. 1897) when preparing my revision of the genus *Cynolebias* ('Annals,' Nov. 1912, p. 505). Berg's paper is important not only for the description of two new species, but for the conclusion that *Cynolebias bellottii* is the male and *C. maculatus* the female of one species, the difference in the number of dorsal and anal rays being a sexual character.

Herr Rachow tells me that from his own observations in the aquarium there can be no doubt that *C. maculatus* is the female of *C. bellottii*, and he has sent me some specimens in support of this. After examination of the sexual organs of all the specimens of *Cynolebias* in the collection of the British Museum, I have no doubt whatever that he is right; but I am not acquainted with any other instance in the whole class of fishes of a difference between the sexes in the number of fin-rays.

The males and females of *C. bellottii* differ as follows:—

♂ *C. bellottii*.

Brownish, sometimes with vertical series of pale spots; fins violet.

Dorsal and anal fins relatively long, low, and many-rayed.

D. 21-24, A. 26-31; dorsal origin equidistant from end of snout and base of caudal fin, behind that of anal; longest rays $\frac{1}{2}$ to $\frac{3}{8}$ length of head.

In consequence of the length of the anal the pectoral extends beyond its origin and the caudal peduncle is shorter than deep.

♀ *C. maculatus*.

Vertically expanded dark brown or violet spots on body and vertical fins.

Dorsal and anal fins relatively short, deep, and few-rayed.

D. 16-19, A. 22-26; dorsal origin nearer to base of caudal than to end of snout, above that of anal; longest rays $\frac{3}{4}$ or $\frac{2}{3}$ length of head.

The pectoral does not reach the anal and the caudal peduncle is longer than deep.

Similar differences are exhibited by the two species described by Berg; these are:—

1. *Cynolebias gibberosus*.

Berg, *Anales Mus. Nac. Buenos Aires*, v. 1897, p. 294.

♂. D. 25, A. 33; ♀. D. 17, A. 26. 37 to 40 scales in a

longitudinal series. Similar to *C. bellottii* in form and coloration in both sexes; back in front of dorsal fin arched, bearing a series of bony tubercles; head bony, with post-orbital tubercles.

Province of Buenos Aires.

Total length 85 mm.

2. *Cynolebias holmbergi*.

Berg, *t. c.* p. 296.

♂. D. 21, A. 25; ♀. D. 17, A. 21. At least 60 scales in a longitudinal series. Head $3\frac{1}{3}$ to $3\frac{1}{2}$ in length to base of caudal. Yellowish; a dark bar on the head.

Province of Buenos Aires.

Total length 300 mm.

In *C. melanotenia* the males are similar to the females both in coloration and in number of fin-rays; in this species the pelvic fins are separated by an interspace, whereas in *Cynolebias* proper they are contiguous and often united at the base. I therefore propose to make *C. melanotenia* the type of a new genus, which may be named *CYNOPECILUS*.

I have ascertained that the types of *C. robustus* and *C. nigripinnis* are males; the single example of *C. elongatus* in the British Museum collection has been eviscerated, but it seems probable that the two or three specimens known of this species are females, whilst the type of *C. porosus* may be a female also.

Assuming this to be the case, the number of scales in a longitudinal series, and of dorsal and anal rays in both sexes, of the species of *Cynolebias* may be tabulated as follows:—

	Scales.	♂.	♀.
<i>C. nigripinnis</i> ..	28	D. 26; A. 25
<i>C. bellottii</i>	28 to 30	D. 21-24; A. 26-31	D. 16-19; A. 22-26
<i>C. robustus</i>	33	D. 22; A. 24
<i>C. gibberosus</i> ..	37 to 40	D. 25; A. 33	D. 17; A. 26
<i>C. porosus</i>	40	D. 18; A. 20
<i>C. elongatus</i> ..	45 to 50	D. 17; A. 20
<i>C. holmbergi</i> ..	60	D. 21; A. 25	D. 17; A. 21